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CLAIMS (first page - amended)

1. A steel composition intended to be used in a process comprising a cold rolling step, for the production of uncoated, electro-galvanised or hot dip galvanised TRIP steel products, said composition being characterised by the following contents:

- C : between 1300ppm and 2600ppm,

- Mn : between 10000ppm and 22000ppm,

10 - Al : between 8000ppm and 15000ppm,

- Si : between 2000ppm and 6000ppm,

- P : between 400 and 1000ppm,

- S : maximum 120ppm,

- N : maximum 200ppm,

15 - Ti : maximum 1000ppm,

- Nb : maximum 1000ppm,

- V : maximum 1000ppm,

- B : maximum 10ppm.

the remainder being substantially—iron and incidental 20 impurities.

- 2. The steel composition according to claim 1, comprising a carbon content between 1300ppm and 1900ppm.
- The steel composition according to
 claim 2, comprising a carbon content between 1350ppm and
 1900ppm.
 - 4. The steel composition according to claim 2, comprising a carbon content between 1400ppm and 1900ppm.
- 5. The steel composition according to claim 1, comprising a carbon content between 1700ppm and 2300ppm.

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- 6. The steel composition according to claim 1, comprising a carbon content between 2000ppm and 2600ppm.
- 7. The steel composition according to 5 either one of claims 2 to 6, comprising :
 - Mn : between 13000ppm and 22000ppm,
 - Al: between 8000ppm and 14000ppm,
 - Si : between 2500ppm and 4500ppm,
 - P: between 600 and 1000ppm,
- 10 S : maximum 120ppm,
 - N : maximum 150ppm,
 - Ti : maximum 200ppm,
 - Nb : maximum 100ppm,
 - V : maximum 100ppm,
- 15 B : maximum 5ppm.

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- 8. The steel composition according to claim 7, comprising an aluminium content between 9000ppm and 13000ppm.
- 9. A process for manufacturing a cold 20 rolled TRIP steel product, comprising the steps of:
 - preparing a steel slab having a composition according to any one of claims 1 to 8,
 - hot rolling said slab, wherein the finishing rolling temperature is higher than the Ar3 temperature, to form a hot-rolled substrate,
 - cooling said substrate to a coiling temperature (CT) between 500°C and 680°C,
 - coiling said substrate at said coiling temperature,
 - pickling said substrate to remove the oxides,
- 30 cold rolling said substrate to obtain a reduction of thickness, with a minimum reduction of 40%.

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- 10. The process according to claim 9, further comprising the steps of:
- soaking said substrate at a temperature between 760°C and 850°C,
- 5 cooling said substrate with a cooling rate higher than 2°C/s to a temperature in the range 360°C to 450°C,
 - holding said substrate in said temperature range for a time less than 700s,
- cooling said substrate to room temperature at a cooling
 rate higher than 1°C/s.
 - subjecting said substrate to a skinpass reduction of maximum 1.5%.
 - 11. The process according to claim 10, further comprising an electrolytic zinc coating step.
- 15 12. The process according to claim 9, further comprising the following processing steps:
 - soaking said substrate at a temperature between 760°C and 850°C,
- cooling said substrate with a cooling rate higher than
 2°C/s to the temperature of a Zn-bath,
 - holding said substrate in the temperature range between 490°C and 460°C for less than 200 seconds.
 - hot dip galvanising said substrate in said Zn-bath,
- cooling said substrate to room temperature at a cooling
 rate higher than 2°C/s.
 - 13. The process according to claim 12, further comprising the step of subjecting said substrate to a skinpass reduction of maximum 1.5%.
- 14. A steel product produced according to 30 the process of any of claims 8 to 11 and having a microstructure comprising 30-75% ferrite, 10-40% bainite, 0-20% retained austenite and possibly 0-10% martensite.

- 15. A steel product produced according to the process of any one of claims 10 to 13, said product comprising a carbon content between 1300ppm and 1900ppm, said product having a yield strength between 320MPa and 5 480MPa, a tensile strength above 590MPa, an elongation A80 higher than 26% and a strain hardening coefficient, calculated between 10% and uniform elongation, higher than 0.2.
- 16. A steel product produced according to the process of any one of claims 10 to 13, said product comprising a carbon content between 1700ppm and 2300ppm, said product having a yield strength between 350MPa and 510MPa, a tensile strength above 700MPa, an elongation A80 higher than 24% and a strain hardening coefficient, 15 calculated between 10% and uniform elongation, higher than 0.19.
- 17. A steel product produced according to the process of any one of claims 10 to 13, said product comprising a carbon content between 2000ppm and 2600ppm, 20 said product having a yield strength between 400MPa and 600MPa, a tensile strength above 780MPa, an elongation A80 higher than 22% and a strain hardening coefficient, calculated between 10% and uniform elongation, higher than 0.18.
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 18. A steel product produced according to the process of any one of claims 10 to 13, said product comprising a carbon content between 2000ppm and 2600ppm, said product having a yield strength between 450MPa and 700MPa, a tensile strength above 980MPa, an elongation A80 higher than 18% and a strain hardening coefficient, calculated between 10% and uniform elongation, higher than 0.14.
 - 19. A steel product produced according to any one of claims 14 to 18, having bake hardening BH2

higher than 40MPa in both longitudinal and transversal directions.